Vol. XXII, pp. 29-38 March 10, 1909

PROCEEDINGS

OF THE

BIOLOGICAL SOCIETY OF WASHINGTON

NOTES ON SOME RARE OR NOT WELL-KNOWN COSTA RICAN BIRDS.

BY OUTRAM BANGS.

From December, 1907, to June, 1908, C. F. Underwood was in the field collecting birds in Costa Rica; all the material gathered during this time came to me. Many rare species, and some new to Costa Rica, were secured, and in the following notes I list those that are of special interest.

The principal places worked by Underwood on this trip were the Volcán de Tenorio and the Cerro Sta. Maria, northwestern Costa Rica; La Vijagua in the eastern water shed of the same general range of mountains, toward the Nicaraguan boundary; Bolson, in the lagoon region of the north Pacific faunal area of Costa Rica; and Coralillo, Buenos Aires, and El General, all in the Pacific faunal area.

Rostrhamus sociabilis (Vieill.).

One female everglade kite was taken at Bolson December 28, 1907. The bird is of rare occurrence in Costa Rica, and this specimen is the first I have been able to get from that country.

Aramides cajanea (Müll.).

One young female, about one-third grown, in nestling plumage and without wing feathers, was secured at El General June 19, 1908. In color it differs but little from adults, having rufous underparts and a gray neck, the gray color somewhat obscured by tufts of reddish-brown down. It proves conclusively that the wood rails of this section of the genus do not pass through a gray juvenile plumage.

Leptotila plumbeiceps Scl. & Salv.

Two adult males of this dove were taken at Bolson, one December 18, the other December 29, 1907. This is, I believe, the farthest south that the species has been traced and the first Costa Rican record. *Leptotila*

verreauxi Bonap. also was taken in large series at Bolson, the two species thus occurring together at this point.

Leptotila cassini vinaceiventris (Ridg.)

Many specimens referable to this form were secured at Tenorio, Cerro Sta. Maria and La Vijagua. *Leptotila cassini vinaceiventris* is exactly intermediate in characters as well as in geographic position, between *L. cassini cassini* Lawr. of Panama and Veragua and *L. cassini cerviniventris* (Scl. & Salv.) of Guatemala and British Honduras.

Geotrygon albiventer Lawr.

Two fine adults of this rare dove, so very uncommon in other parts of Costa Rica or in Panama, were taken on Tonorio February 10, 1908.

Geotrygon lawrencii Salv.

Two specimens of Lawrence's quail dove were secured on Tonorio, thus extending the range of the species to the northern boundaries of Costa Rica.

Geotrygon chiriquensis Scl.

The capture of a male of this species in Cerro Sta. Maria January 9, 1908, extends its range somewhat to the north of previous records, well toward the Nicaraguan frontier.

Neomorphus salvini Scl.

Salvin's ground cuckoo is so seldom taken by bird collectors that two examples secured by Underwood, one at La Vijagua February 14, the other in the Cerro Sta. Maria January 9, 1908, are worthy of record.

Trogon underwoodi Bangs.

Six males and one female were taken on Tenorio and in the Cerro Sta. Maria in January and February, 1908. With the exception of one male which comes very close to the most deeply colored example of *T. aurantiiventris* from Chiríqui, this series runs very uniform and quite like the type from Miravalles. The females of the two forms are not very different, and perhaps *T. underwoodi*, in spite of the peculiar distribution of these trogons, had better be considered a northern subspecies of *T. aurantiiventris* than a distinct species.

Trogon melanocephalus illaetabilis subsp. nov.

Type from Bolson, Costa Rica. No. 22,781, collection of E. A. & O. Bangs. ♂ adult. Collected December 25, 1907, by C. F. Underwood.

Characters.—Similar to true *T. melanocephalus* from eastern Mexico south through Yucatan, eastern Guatemala and Honduras to eastern Nicaragua, except that adult male has head, throat and chest dark gray-slate color to blackish slate, instead of black; the adult ♀ with these parts and the back and scapulars also, much paler and grayer than in true *T. melanocephalus*. Size averaging slightly larger and the bill slightly heavier.

MEASUREMENTS.

No.	Sex.	Locality.	Wing.	Tail.	Tarsus.	Exposed Culmen.
22,781	♂ ad.	C. R. Bolson . .	143	134	15	21.5
22,782	♂ ad.	do . .	144	137	14.5	20
22,783	♂ ad.	do . .	146.5	141.5	14	22
22,784	♂ ad.	do . .	144	142.5	14.5	22
22,785	♂ ad.	do . .	142	142.5	14	24
22,786	♂ ad.	do .	142	144	15	23.5
22,804	♂ ad.	C. R. Tenorio .	145	136	14	24
16,583	♂ ad.	C. R. Bebedero	143	142	14	21
22,795	♀ ad.	C. R. Bolson . .	141	137	13.5	21
22,796	♀ ad.	do . .	143	137.5	14	21.5
22,797	♀ ad.	do . .	141	131	14.5	21
22,798	♀ ad.	do . .	142	137	14.5	22
22,799	♀ ad.	do . .	140	132	14	22.5
22,800	♀ ad.	do . .	139	141	13.5	21
22,801	♀ ad.	do . .	141	144	14	22
22,802	♀ ad.	do . .	144	142	14	22.5

For comparison with these a series of *Trogon melanocephalus melanocephalus* Gould affords the following measurements:

No.	Sex.	Locality.	Wing.	Tail.	Tarsus.	Exposed Culmen.
2248	♂ ad.	Mex. V.C. Pasa Nueva	139	143	14	20
2249	♂ ad.	do	138	140	14	20.5
15,275	♂ ad.	Yuc. San Filipe . . .	135	141	13.5	19
15,276	♂ ad.	do . . .	136.5	137	14	21
10,296	♂ ad.	Honduras, Ceiba . .	131	139.5	14.5	20
10,298	♂ ad.	do . .	131	133	14.5	20.5
10,300	♂ ad.	do . .	138.5	143.5	13.5	21
2250	♀ ad.	Mex. V.C. Pasa Nueva	133	134	14.5	20
15,892	♀ ad.	Yucatan	136	136	14.5	19
10,295	♀ ad.	Honduras, Ceiba . .	135	133	14	19
10,299	♀ ad.	do . .	133	137	13.5	19
10,301	♀ ad.	do . .	132.5	137.5	13.5	20.5

Remarks.—Trogon melanocephalus illaetabilis is found in Costa Rica only in the northwestern to north central parts of the country. Specimens from western Nicaragua appear to be quite the same as those from Costa Rica, and the form is distinguished from true *T. melanocephalus* of the eastern slopes of Central America from southern Mexico to eastern Nicaragua chiefly by its grayer head and chest, and by being a trifle larger. In both subspecies young birds have grayer or paler heads and necks than do adults. The young are easily told by the markings of the tail feathers and wings, and should of course not be compared with adults. The young of the two subspecies, however, when compared are nearly as different one from the other as are the old birds.

Prionornis carinatus (Du Bus).

As there are very few Costa Rican records for this bird, an adult male from La Vijagua March 3, 1908, is worthy of mention. At the same place Underwood also took examples of *Prionornis minor* Hartert.

Hylomanes momotula Licht.

Twelve specimens were secured at La Vijagua, Tenorio and Cerro Sta. Maria during January and February, 1908. Upon comparing these skins with an equal number from Mexico, Guatemala, and British Honduras, I fail to find any constant differences.

Glaucidium griseiceps Sharpe.

One adult male, La Vijagua, February 25, 1908. Although Sharpe in his Hand List of Birds gives the range of this owl as extending south to Panama, this is, so far as I know, the first actual record of its capture in Costa Rica.

Platypsaris aglaiæ latirostris (Bonap.).

At Bolson, in December, 1907, Underwood took two adult males, two young males and an adult female of the gray becard. The two old males are nearly alike; each has an ill-defined, small, pinkish-white throat patch. The subspecies, which is a very strongly characterized one, is rare in collections and there are but few Costa Rican records.

Scotothorus veræpacis (Scl.).

In the last few years I have accumulated a very large series of this species from Costa Rica, which proves conclusively that the supposed southern form, my *Scotothorus veræ-pacis dumicola*, was based wholly on differences due to individual variation, and that such a form does not really exist. Any large series from any one place, whether within the limits of the Pacific fauna or the Caribbean fauna, is found to contain specimens exactly like the northern true *veræ-pacis*, others representing the so-called *dumicola* and others again variously intermediate.

Piprites griseiceps Salv.

Two specimens, male and female, were taken at La Vijagua February 19 and March 1, 1908. The bird still remains so rare that I mention these two additional examples, especially as they are from a locality from which the species has not before been recorded.

Rhynchocyclus marginatus Lawr.

At La Vijagua, Underwood took two adult females of this very distinct and exceedingly rare tyrant bird, one on February 21, the other February 25, 1908. These two specimens agree in color (except in having the yellow of belly and wing-margins paler, and therefore more like the type from Panama) with the only other known Costa Rican skin, an adult male from Corrillo in my collection. They afford the following measurements:

No.	Sex.	Wing.	Tail.	Tarsus.	Exposed Culmen.
22,151	♀ ad.	59.5	46	16	11.5
22,152	♀ ad.	60.5	47	16.5	12

These, as will be seen, by comparison of Ridgway's* measurements of the type, male, and co-type, female, from Lion Hill Station, Panama, are very similar, and while my Corrillo specimen differs somewhat, I believe the Costa Rican and Panaman specimens referable to one form.

Camptostoma imberbe Scl.

The beardless flycatcher has a more southward range than has been supposed, as proved by a small series taken lately by Underwood in northern Costa Rica, as follows: Tenorio, ♂, January 23, 1908; ♀, February 7, 1908; Coralillo, ♀, April 6, 1908; Bolson, ♂, December 10, 1907, ♀, December 17, 1907. At the latter place, Bolson, he also took *Camptostoma pusillum flaviventre* (Scl. & Salv.), the ranges of the two species thus meeting in western Costa Rica.

Pipromorpha assimilis (Scl.).

In Birds of North and Middle America, Ridgway says that all Costa Rican specimens examined by him were intermediate between *P. assimilis assimilis* and *P. assimilis dyscola*. While this is absolutely true, especially as regards measurements, there is nevertheless such a conspicuous difference in color between series of skins from the north Caribbean fauna on the one hand and the south Pacific fauna on the other, that I think a better plan is to include both forms in the Costa Rican ornis. Skins from such points (in the Caribbean fauna) as Carrillo, Tenorio and La Vijagua, though smaller, are in color very similar to or often quite the same as specimens from Mexico to Honduras, representing true *Pipromorpha assimilis* (Scl.), and may safely be called by that name.

Examples from the Boruca region of southwestern Costa Rica are very nearly, both in size and color, typical *P. assimilis dyscola* (Bangs), and from thence northward at least to Pozo Azul and Buenos Aires all specimens can be referred to this form.

Myiophobus fasciatus furfurosus (Thayer & Bangs).

This Panaman species lately added to the Costa Rican ornis by Carriker, who took it at Buenos Aires de Terraba,† appears to be of such rare occurrence in Costa Rica that one young female in nestling plumage secured by Underwood at El General June 13, 1908, is worthy of record. This example differs from adults from Panama only in being a little more reddish-brown both above and below and in lacking the yellow crown-patch.

* Birds of North and Middle America, Part IV, pp. 392, 393, 1907.

† Annals of the Carnegie Museum, Vol. IV, p. 302, 1908.

Myiarchus nuttingi nuttingi Ridg.

Myiarchus brachyurus Ridg.

In Birds of North and Middle America, Ridgway expressed a doubt as to the distinctness of these two tyrant birds, and gave *brachyurus* subspecific rank. I find, however, that my thirty specimens from northern and western Costa Rica fall without an intergrade, when compared by measurements, into two series, one a large bird with a heavy bill (*brachyurus*); the other a small bird with a small, slender bill (*nuttingi*). Correlated with this marked difference in size is a slight though constant difference in color, which in skins taken in December, January and February is quite appreciable. In faded specimens I fancy it would not be so easily detected; the smaller bird (*nuttingi*) being brighter yellow below, and browner, less grayish olive above.

As the range of these two tyrants is coincident over a very large area, they can not be geographical races of one species, and as they certainly seem distinct I believe Nelson's arrangement in his revision of the North American Mainland Species of *Myiarchus** the correct one. Here Nelson considered *Myiarchus brachyurus* specifically distinct from *M. nuttingi* and *M. inquietus*, a northern subspecies of *nuttingi*.

Henicorhina prostheleuca (Scl.).

The case of the white-breasted wood wrens is another instance of a large amount of material (my series now numbers two hundred skins) proving that two races instead of one should be credited to Costa Rica.

Specimens from Carrillo, La Vijagua, Tenorio and Cerro Sta. Maria are all referable to *H. prostheleuca prostheleuca* Scl., some of them somewhat intermediate, but very many absolutely indistinguishable from Mexican examples. Skins from any point in southwestern Costa Rica belong, of course, to *H. prostheleuca pittieri* (Cherrie). The two subspecies are easily told apart, one of the best characters being the color of the median crown-stripe.

Microcerculus.

On his last collecting trip Underwood took examples of the nightingale wren in Costa Rica as follows:

El General (Pacific fauna), four fully adult males, June and July; La Vijagua (Caribbean fauna), one young male, one nearly fully adult female, February; Cerro Sta. Maria (mostly but not wholly Pacific fauna), two males and one female, all immature, January; Tenorio (mostly but not wholly Pacific fauna), two young females, February.

These with three skins from Boquete, on the Volcán de Chiríqui, collected by Brown (upon which I founded my *M. acentetus*), gives me a series of fourteen skins from Costa Rica and Chiríqui, that perplexes me much, and causes me to doubt the existence in Central America of but one form. For the help of any other ornithologist who may be fortunate enough to secure a better series still of this elusive little ventriloquous inhabitant of the deep forest I shall discuss the specimens pretty fully.

* Proc. Biol. Soc. Wash., XVII, pp. 21–50, March 10, 1904.

Three forms are supposed to occupy Central America as follows:

Microcerculus philomela Salv. Guatemala. Larger; less rufescent brown.

M. daulias Ridg. Eastern Costa Rica. Smaller; more rufescent brown.

M. luscinia Salv. Panama to southwestern Costa Rica. Smaller; with underparts darker and much more uniform.

The slight differences in size claimed for the various races do not appear to hold—one male from El General, which should belong to *M. luscinia*, supposedly the smallest race, has the wing 61.5, larger than in *M. daulias*, considered to be the largest race.

As to color, immature examples, that is those with dusky vermiculations above, and with the underparts varied with V-shaped paler markings and with slight dusky bars on flanks, vary *very much* from one locality. Two skins from Cerro Sta. Maria have whitish throats in marked contrast to the color of the rest of the underparts; another from the same place has the throat dark grayish brown, not very different from the color of the breast and belly. One of the skins with a white throat has all the feathers of the chest, breast and belly broadly edged with grayish-white and whitish V-shaped marking lower down on the same feathers. The other white-throated one lacks the white edges to these feathers, but has the pale V-shaped markings. The third, with a grayish-brown throat, has no whitish markings below, but has the feathers of the breast and belly with dark grayish V-shaped markings.

Two from Tenorio and one from La Vijagua are very similar to the third just described from Cerro Sta. Maria. The female from La Vijagua, which is in nearly fully adult plumage, is, however, very different, and is hardly distinguishable in any way from the specimens from Chiríqui, and I should unhesitatingly call it *M. luscinia*. It differs only in having some slight traces of dusky vermientations above and indistinct dusky bands on the flanks—both probably last remnants of immaturity.

Lastly the three fully adult specimens from the Volcán de Chiríqui, taken in March and April, and the four adults from El General, southwestern Costa Rica, in June and July, are all alike, except that the El General skins are slightly paler, grayer brown on breasts and bellies, and slightly more rufescent on flanks, differences doubtless due to season, especially as neither series runs perfectly constant in this respect, and one skin from Chiríqui (the palest) practically matches one (the darkest) from El General.

It thus appears to me that three facts, at least, are obvious enough:

(1.) Differences of size in Central America specimens of *Microcerculus* are not great enough or constant enough to be of diagnostic value.

(2.) Specimens in immature plumage from one locality show a wide range of variation in color and markings (possibly due to age of the individual, it requiring more than one month to attain the adult plumage).

(3.) Specimens in adult plumage, or nearly so, are subject to a slight seasonal variation in color, but apart from this can not satisfactorily be distinguished from such remote places lying in such different general faunal areas as northeastern Costa Rica on the one hand and southwestern Costa Rica and Chiríqui on the other.

Vireolanius pulchellus viridiceps Ridg.

At El General (Pacific fauna) on June 20, 1908, Underwood took an adult male and female of this well-marked form.

Vireolanius pulchellus verticalis Ridg.

Two specimens, adult male and female, were secured by Underwood at La Vijagua (Caribbean fauna) on February 24 and 25, 1908. These two races are beautifully distinct, and as the shrike-vireo is one of the really very rare Costa Rican birds, the records of additional localities are worth making.

Hirundo erythrogastra Bodd.

In the latter part of May, 1908, barn swallows were abundant at Buenos Aires, and Underwood took a small series of specimens between the 23d and 26th. The birds were apparently not breeding, but were belated migrants. The late dates at which many other North American species still linger in Costa Rica was a revelation to me as I began to receive collections from that country, and I am still at a loss to account for it.

Wilsonia pusilla pusilla (Wils.).

Three specimens, all referable to this sub-species, were taken—one female on Tonorio February 1, 1908, two males in the Cerro Sta. Maria January 4 and 8, 1908—by Underwood last winter. The identification is positive; I myself felt sure of it, but to be doubly certain submitted the skins to Ridgway, who confirmed my opinion. The bird in winter plumage can be told from *W. pusilla pileolata* not only by its duller coloration, but by its smaller size, especially shorter wing. This record extends the southward range of the form in winter by a considerable distance, southern Mexico being, I believe, the farthest south it had previously been taken on the continent. *W. pusilla pileolata* (Pallas) is very abundant in winter, especially at higher elevations in southern and central Costa Rica and Chiríqui, and remains till late in May. It was not, however, found by Underwood in northern Costa Rica during his last year's work.

Basileuterus rufifrons mesochrysus (Sel.).

A large series taken at Buenos Aires and El General, both places within the south-Pacific faunal area of Costa Rica, in May, June and July, represents this form apparently in its extreme, the specimens being quite indistinguishable from examples from Colombia and Panama. I also find that skins from the Boruca region of Costa Rica, formerly referred to *B. rufifrons delattrii* (Bonap.) by me,* belong here.

Basileuterus rufifrons delattrii (Bonap.) was also taken in large series on Tenorio and in the Cerro Sta. Maria, and this form appears to occupy all eastern and northern Costa Rica, from the vicinity of San José northward and eastward.

The two sub-species are easily distinguished by well-marked differences in color, and by the much longer tail of *B. rufifrons delattrii*. At the time I published the paper referred to I had no skins of this latter form.

* Auk, Vol. XXIV, p. 306, July, 1907.

Euphonia gnatho (Cabanis).

After very careful study of all available material I am convinced that all Costa Rican birds (some of which have been called *Euphonia hirundinacea* Bonap.) are in reality referable to *Euphonia gnatho*, and that that species is an excellent one. I am glad to be able to state that Ridgway now thoroughly agrees to this.

The bill, though it varies much individually in size, is always larger, sometimes very much larger in *E. gnatho* than in *E. hirundinacea* and always different in shape. The female is much yellower below than the female of *E. hirundinacea*, though this varies individually somewhat, the extreme being reached in the female described by Ridgway* from Pigres. The male is always metallic greenish-blue above, in place of the metallic dark blue of *E. hirundinacea*, the difference being very striking on comparison of series.

Though *E. gnatho* does not appear to be a very common species, I now have a fairly large series, including both sexes, from various parts of Costa Rica, and from the Caribbean as well as the Pacific areas.

Phoenicothraupis alfaroana Ridg.

On Tenorio and in the Cerro Sta. Maria this recently described ant tanager was quite abundant, and a series of fifty-four specimens was taken in January and February, 1908. Considerable individual variation in both sexes is presented by this series, and many skins are much darker in color than any among the original specimens from Miravalles. Some examples, in fact, come very close to *P. rubica nelsoni* of Yucatan, and I am rather inclined to the belief that the form is really the palest race of *rubica*, and its relationship to *P. rubra* of South America is more distant.

Chlorothraupis carmioli (Lawr.).

At La Vijagua in February, 1908, Underwood found Carmiol's tanager in large numbers and took upwards of sixty specimens. Some dozen individuals in this series are extensively, but irregularly, marked about the head, throat, scapulars and sides of the breast with dull vermilion, and others are slightly so marked. The red markings are not due to extraneous staining, but to red pigment in the feather itself. Both sexes show this red mottling and I am unable to account for it unless it be reversion to some ancestral bright-colored bird, like *Piranga*, which the irregular nature of the markings rather suggest.

Aimophila rufescens hypæthrus subsp. nov.

Type from Cerro Sta. Maria, northern Costa Rica. No. 21,606, collection of E. A. and O. Bangs. ♂ adult, collected January 4, 1908, by C. F. Underwood.

Characters.—A well-marked geographic race, nearest to *Aimophila rufescens rufescens* Swains, of southern Mexico and Guatemala, but rather smaller, with the bill actually larger; whole upperparts distinctly darker; lateral crown stripes much more dusky; dusky shaft stripes on

* Proc. Biol. Soc. Wash., Vol. XVIII, Oct. 17, 1905, pp. 225–226.

back and scapulars much broader and more conspicuous. From *A. rufescens discolor* Ridg. of the coastal regions of Honduras and British Honduras the new form differs much, being larger, much darker above, and much less grayish on sides of head, breast and flanks.

MEASUREMENTS.

No.	Sex.	Locality.	Wing.	Tail.	Tarsus.	Exposed culmen.
21,606	♂	Cerro Sta. Maria	75	78	25.5	18
21,605	♂	do	72	74	26	17.5
21,601	♂	do	75	78.5	26	17
21,602	♂	do	73	74	25	17
21,607	♂	do	77	78	26	18
21,608	♂	Tenorio	73.5	74	26	17.5
21,603	♀	Cerro Sta. Maria	69	—	24.5	17
21,604	♀	do	71	75	25	16.5

Remarks—Late explorations have shown that this russet-tailed ground sparrow is a not uncommon resident of the mountains of northern Costa Rica, and on his last trip Underwood took specimens on Tenorio and in the Cerro Sta. Maria. On comparing these with the two forms which are geographically nearest I found the Costa Rican bird to be very different from either. Nelson, to whom I showed the specimens, also agrees as to its distinctness, and it remains but to give it a name.

Amaurospiza concolor Cabanis.

Three specimens from Tenorio, an adult male killed January 26, and a pair, adult male and female, January 25, 1908. The female is uniform tawny-brown above and on sides, and slightly paler and more cinnamoneous on throat and middle of belly. So far as I know this is the first female of the species that has been taken.

Sporophila minuta minuta (Linn.).

Carriker lately recorded a single immature male taken by himself at Buenos Aires, the first Costa Rican example of the species. When Underwood visited Buenos Aires in May, 1908, he found *Sporophila minuta* abundant, but wholly confined to the open savanna and exceedingly shy. He collected a series of twenty specimens which includes adults of both sexes and immature males.